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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,929	11/21/2003	John M. Forsythe	1957-6012.1US	4005
24247	7590	01/06/2011	EXAMINER	
TRASKBRITT, P.C. P.O. BOX 2550 SALT LAKE CITY, UT 84110			HYUN, PAUL SANG HWA	
			ART UNIT	PAPER NUMBER
			1772	
			NOTIFICATION DATE	DELIVERY MODE
			01/06/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOMail@traskbritt.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/719,929	<b>Applicant(s)</b> FORSYTHE ET AL.	
	<b>Examiner</b> PAUL S. HYUN	<b>Art Unit</b> 1772	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/25/10</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed by Applicant on October 25, 2010 has been acknowledged. Claims 1, 3-7, 9-13 and 15-21 remain pending. Applicant amended independent claims 1 and 12.

The IDS filed by Applicant on October 25, 2010 has been acknowledged. The claim rejection under 35 U.S.C. section 112 cited in the previous Office action has been withdrawn in light of the amendment.

### ***Claim Objections***

Claim 10 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The method steps recited in claim 10 is encompassed by the method recited in claim 1.

Claim 12 is objected to because of the following informalities:

The limitation "tubor" in the penultimate line of the claim is misspelled.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims **1, 3, 4, 6, 7, 9-13, 15-17 and 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Forsythe et al. (US 5,965,489) in view of Anton et al. (US 2001/0053517 A1).

Forsythe et al. disclose a kit for extracting DMN (a sprout inhibitor) from a crop sample as well as a method for using the kit to extract DMN from a crop sample (see lines 29-38, col. 7). The method comprises the steps of providing an extraction solution (e.g. hexane) capable of dissolving DMN, providing a crop sample (e.g. potato), cutting the crop sample into quarters, and mixing one of the quarter portions of the potato and the extraction solution thereby extracting the DMN into the solution. The amount of DMN extracted by the solution is quantified, and this value is multiplied by four (to take into account that only a quarter of a whole potato was analyzed) and subsequently divided by the weight of the whole potato to express the concentration of DMN as parts per million for a whole potato.

The method disclosed by Forsythe et al. differs from the methods recited in claims 1 and 12 in that Forsythe et al. do not explicitly disclose that the potato is initially collected at a crop storage location and subsequently transported to a chemical testing facility for analysis. In addition, Forsythe et al. do not disclose the use of an internal standard. Lastly, Forsythe et al. do not disclose that the concentration of DMN is expressed as a value corresponding to DMN present on the surface of a crop per mass of the crop.

With respect to the step of collecting a crop at a crop storage location and subsequently transporting it to a testing facility, given that Forsythe et al. disclose that

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potatoes are stored at storage facilities (see line 17, col. 7) and that the analysis of DMN is accomplished via gas chromatography (see line 33, col. 7), it would have been obvious to one of ordinary skill in the art to collect the potato sample disclosed by Forsythe et al. at a crop storage facility where potatoes are located, and then transport the sample to a chemical testing facility where a gas chromatograph is located for quantifying DMN.

With respect to the internal standard, Anton et al. disclose a kit for collecting and analyzing an unknown sample. The kit comprises a known quantity of internal standard that is used to “spike” the sample. The internal standard is used to determine the natural degradation of the sample from the time the sample is collected and the sample is analyzed (see [0007]). This is accomplished by obtaining the ratio of the quantity of the internal standard at the time of sample analysis and the known initial quantity of internal standard at the time the sample is collected, and applying this ratio to the quantified sample (see [0022]). In light of the disclosure of Anton et al., it would have been obvious to one of ordinary skill in the art to spike the potato sample disclosed by Forsythe et al. with an internal standard to account for the natural degradation of DMN from the time the sample is collected and the time the DMN is quantified. Naturally, the determination of the amount of DMN present in the potato sample would comprise the step of multiplying the quantified amount of DMN by the calibration ratio.

With respect to the step of expressing the concentration of DMN as DMN present on the surface of a potato per mass of the potato, it would have been obvious to one of ordinary skill in the art to express the concentration of DMN in different units for the

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purpose of performing various data analysis that require numbers to be expressed in different units. That said, instead of expressing the measured amount of DMN as parts per million for a whole potato as disclosed by Forsythe et al., it would have been obvious to one of ordinary skill in the art to express the measured value as DMN present on the surface of a potato per mass of the potato by accounting for the surface area of the potato sample.

With respect to claims 3, 11, 15 and 21, it is apparent that the kit disclosed by Forsythe et al. comprises a container for holding the extraction solution.

With respect to claims 4, 16 and 17, Forsythe et al. disclose that the quantification of DMN in the potato sample is accomplished using gas chromatography (see lines 29-38, col. 7).

With respect to claims 6 and 19, the mass of the potato sample discussed above constitutes information about the sample.

With respect to claim 7, Forsythe et al. disclose that the sample is a potato as discussed above.

With respect to claim 9, DMN (dimethylnaphthalene) is substituted naphthalene.

With respect to claim 13, Forsythe et al. disclose that the potato is cut into quarters, as discussed above.

With respect to claim 20, Forsythe et al. disclose that the crop sample is washed prior to extraction (see lines 29-38, col. 7).

Claims **5 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Forsythe et al. in view of Anton et al. as applied to claims 1, 3, 4, 6, 7, 9-13, 15-17 and 19-21 above, and further in view of Cummins et al. (US 5,081,010).

Neither Forsythe et al. nor Anton et al. disclose the step of providing instructions for informing a user on how to collect the sample.

Cummins et al. disclose a kit for extracting an analyte from a sample mixture. (see Abstract). The kit comprises instructions for informing a user on how to use the kit (see line 5, col. 8). In light of the disclosure of Cummins et al., it would have been obvious to one of ordinary skill in the art to provide the modified extraction kit disclosed by Forsythe et al. with instructions for informing a user on how to use the kit.

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but they are moot in view of the new grounds of rejection. The amendment necessitated the new grounds of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL S. HYUN whose telephone number is (571)272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, In Suk Bullock can be reached on (571)-272-5954. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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/Paul S Hyun/

Examiner, Art Unit 1772

/In Suk Bullock/

Supervisory Patent Examiner, Art Unit 1772